Attorney's Docket No.: 14878-065001 / D1-002PCT-

Applicant: Noritsugu Yamasaki et al. Serial No.: 09/647,772

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## Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

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1. (Currently Amended) An indole derivative represented by formula (I) or a salt thereof:

wherein R<sub>1</sub> represents an aryl lower alkyl group, said aryl group may be substituted with one or more groups selected from the group consisting of a halogen atom, an aryl group, a heterocyclic group, an aryl lower alkyl group, an aryl lower alkenyl group, a halo lower alkyl group, a lower cycloalkoxy lower alkyl group, and an aryl lower alkynyl group, an aryl lower alkyl group, an aryl lower alkynyl group, a lower alkyl group, an aryl lower alkoxy group, a lower alkylthio group, a lower alkoxy group, and an alkenyl group; and R<sub>2</sub> represents a lower alkyl group, a lower alkenyl group, an aryl group, or a heterocyclic group, each of which may be substituted with a hydrogen atom, a lower alkyl group, a lower alkenyl group, or an aryl group.

- 2. (Currently Amended) The indole derivative or a salt thereof according to claim 1, wherein R<sub>1</sub> is a halo-aryl lower alkyl group, said aryl group may be substituted with a halo lower alkyl group, a lower cycloalkyl lower alkoxy group, a lower cycloalkoxy lower alkyl group, an aryl lower alkynyl group, an aryloxy lower alkyl group, a lower alkylthio group, a lower alkoxy group, or a lower alkenyl group.
- 3. (Currently Amended) The indole derivative or a salt thereof according to claim 1, wherein said derivative is selected from the group consisting of
- 3 (2 chloro 4 (t butylthio)benzyl) 2 methyl 5 (1 pentane sulfonylcarbamoyl)indole,
- 3-(2-chloro 4 (t-butylthio)benzyl) 2 methyl 5 (4 methylbenzene)sulfonylcarbamoyl)indole.
- 3 (2 chloro 4 iodobenzyl) 2 methyl 5 (1 pentanesulfonylcarbamoyl)indole,
- 3-(2-chloro-4-iodobenzyl)-2-methyl-5-((4-methylbenzene)sulfonylcarbamoyl)indole,
- 3 (2 chloro 4 (phenylethynyl)benzyl 2 methyl 5 (1 pentanesulfonylcarbamoyl)indole,
- 3-(2-chloro-4-(phenylethynyl)benzyl)-2-methyl-5-((4-methylbenzene)sulfonylcarbamoyl)indole,

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3-(2-chloro-4-(2-phenylethynyl)benzyl)-2methyl-5-((4-ethylbenzene)sulfonylcarbamoyl)indole.

- 3 (2 chloro 4 (2 phenylethenyl)benzyl) 2 methyl 5 (1pentanesulfonylcarbamoyl)indole,
- 3-(2-chloro-4-(2-phenylethyl)benzyl)-2-methyl-5-((4-methylbenzene)sulfonylcarbamoyl)indole,
- 3 (2 chloro 4 (benzyloxy)benzyl) 2 methyl 5 ((4 methylbenzene)sulfonylcarbamoyl)indole.
- 3 (2 chloro 4 (cyclohexylmethyloxy)benzyl) 2 methyl 5 ((4 methylbenzene)sulfonylcarbamoyl )indole,
- 3 (2 chloro 4 phenylbenzyl) 5 ((5 chloro 2 thiophenesulfonyl)carbamoyl) 2methylindole,
- 3 (2 chloro 4 phenylbenzyl) 5 ((5 bromo 2 thiophenesulfonyl)carbamoyl) 2 methylindole,
- 3 (2 chloro 4 phenylbenzyl) 2 methyl 5 (4pentenesulfonylcarbamoyl)indole,
- 3 ((1 bromonaphthalen 2 yl)methyl) 5 ((5 chloro 2 thiophenesulfonyl)carbamoyl) 2 methylind ole,
- 3 ((1 bromonaphthalen 2 yl)methyl) 5 ((5 bromo 2 thiophenesulfonyl)carbamoyl) 2 methylind ole, and
- 3-(4-bromo-2chlorobenzyl)-2-methyl-5-((4-methylbenzene)sulfonylcarbamoyl)indole[[,]].
- 3 (4 bromo 2 chlorobenzyl) 2 methyl 5 ((4 vinylbenzene)sulfonylcarbamoyl)indole,
- 3 (4 bromo 2 chlorobenzyl) 2 methyl 5 ((2 phenylethenyl)sulfonylcarbamoyl)indole,
- 3-(4 bromo 2 chlorobenzyl) 2 methyl 5 ((1 pentene)sulfonylcarbamoyl)indole,
- 3 (4 bromo 2 chlorobenzyl) 5 ((5 bromo 2 thiophenesulfonyl)carbamoyl) 2 methylindole,
- 3 (4 bromo 2 chlorobenzyl) 2 methyl 5 (4 pentenesulfonylcarbamoyl)indole,
- 5 ((5 chloro 2 thiophenesulfonyl)carbamoyl) 3 (2,4 dichlorobenzyl) 2 methylindole.
- 5 ((5 bromo2 thiophenesulfonyl)carbamoyl) 3 (2,4 dichlorobenzyl) 2 methylindole,
- 3 (2 chloro 4 (trifluoromethyl)benzyl) 2 methyl 5 (1pentanesulfonylcarbamoyl)indole,
- 3 (2 chloro 4 (trifluoromethyl)benzyl) 2methyl 5 (4 methylbenzenesulfonylcarbamoyl)indole,
- 3 (2 chloro 4 (trifluoromethyl)benzyl) 2 methyl 5 ((5 chloro 2 thiophenesulfonyl)carbamoyl)in dole.
- 3 (2 chloro 4 (trifluoromethyl)benzyl) 2methyl 5 ((5 bromo 2 thiophenesulfonyl)carbamoyl)I ndole.
- 3 (2 chloro 4 (trifluoromethyl)benzyl) 2 methyl 5 ((4 vinylbenzene)sulfonylcarbamoyl)indole,
- 3 (2 chloro 4 trifluoromethylbenzyl 2 methyl 5 ((2 phenylethenyl)sulfonylcarbamoyl)indole,
- 3 (2 chloro 4 (trifluoromethyl)benzyl) 2 methyl 5 ((1 pentene)sulfonylcarbamoyl)indole,

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3 (2 chloro 4 phenoxymethyl)benzyl) 2 methyl 5 (1 pentanesulfonylcarbamoyl)indole,
3 (2 chloro 4 (phenoxymethyl)benzyl) 2 methyl 5 (4 methylbenzenesulfonylcarbamoyl)indole,
3 (2 chloro 4 (cyclohexyloxymethyl) benzyl) 2 methyl 5 (1 pentanesulfonylcarbamoyl)indole,
3 (2 chloro 4 (cyclohexyloxymethyl) benzyl) 2 methyl 5 (4 methylbenzenesulfonylcarbamoyl)indole,
3 (2 chloro 4 ethoxybenzyl) 2methyl 5 (4 methylbenzenesulfonylcarbamoyl)indole,
3 (2 chloro 4 ethoxybenzyl) 2methyl 5 (1 pentanesulfonylcarbamoyl)indole,
3 (2 chloro 4 (thiophen 2 yl)benzyl) 2 methyl 5 (4 methylbenzenesulfonylcarbamoyl)indole,
3 (2 chloro 4 (thiophen 2 yl)benzyl) 2 methyl 5 (1 pentanesulfonylcarbamoyl)indole,
3 (2 chloro 4 (furan 2 yl)benzyl) 2methyl 5 (1 pentanesulfonylcarbamoyl)indole,
3 (2 chloro 4 (furan 2 yl)benzyl) 2methyl 5 (4 methylbenzenesulfonylcarbamoyl)indole,
3 (2 chloro 4 (1 hexen 2 yl)benzyl) 2 methyl 5 (4 methylbenzenesulfonylcarbamoyl)indole,
3 (2 chloro 4 (1 hexen 1 yl)benzyl) 2 methyl 5 (4 methylbenzenesulfonylcarbamoyl)indole,
3 (2 chloro 4 (1 hexen 1 yl)benzyl) 2 methyl 5 (1 pentanesulfonylcarbamoyl)indole, and
3 (2 chloro 4 (1 hexen 1 yl)benzyl) 2 methyl 5 (1 pentanesulfonylcarbamoyl)indole.

- 4. (Currently Amended) A pharmaceutical composition for preventing and treating impaired glucose tolerance, diabetes, diabetic complications, syndrome of insulin resistance, polycystic ovary syndrome, hyperlipidemia, atherosclerosis, cardiovascular disorders, hyperglycemia, hypertension, pulmonary hypertension, congestive heart failure, glomerulopathy, tubulointerstitial disorders, renal failure, angiostenosis, distal angiopathy, cerebral apoplexy, chronic reversible obstructions, autoimmune diseases, allergic rhinitis, urticaria, glaucoma, diseases characterized by enteromotility disorders, impotence, nephritis, cachexia, pancreatitis, or restenosis after PTCA, which comprises, as an active ingredient, the indole derivative or a salt thereof according to any one of claims 1 to 3 and a pharmaceutically acceptable carrier.
- 5. (Currently Amended) A mentod of producing the indole derivative of claim 1, the method comprising the steps of:
  - (a) reacting compound of formula (2):

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$$R_3O_2C$$

wherein R<sub>3</sub> represents a lower-alkyl group, with haloid or (1) an aldehyde corresponding to R<sub>1</sub> in the presence of silane, and aldehyde corresponding to (R<sub>4</sub> has the same meaning as in elaim 1) or (2) a halide of  $R_1$ , wherein  $R_1$  has the same meaning as in claim 1;

(b) hydrolyzing a compound of formula (3) obtained in step (a):

$$R_3O_2C$$
 $R_1$ 
 $R_1$ 

wherein R<sub>1</sub> has the same meaning as in claim 1; and

(c) reacting a carboxyl group-activating agent and a subsequently sulfonamide with a compound of formula (4) obtained in step (b):

$$HO_2C$$
 $R_1$ 
 $R_1$ 

wherein  $R_1$  has the same meaning as in claim 1.

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6. (Currently Amended) A method of producing the indole derivative of claim 1, the method comprising the steps of:

(a) reacting a compound of formula (2):

$$R_3O_2C$$

wherein  $R_3$  represents a lower-alkyl group, with haloid or (1) an aldehyde corresponding to  $R_1$  in the presence of silane, and aldehyde corresponding to ( $R_1$  has the same meaning as in claim 1) or (2) halide of  $R_1$ , wherein  $R_1$  has the same meaning as in claim 1;

(b) hydrolyzing a compound of formula (3) obtained in step (a):

$$R_3O_2C$$
 $R_1$ 
 $R_1$ 

wherein  $R_1$  has the same meaning as in claim 1;

(g) reacting a halogenating agent with a compound of formula (4) obtained in step (b):

$$HO_2C$$
 $R_1$ 
 $R_1$ 

wherein  $R_1$  has the same meaning as in claim 1; and

(h) reacting a sulfonamide with a compound of formula (8) obtained in step (g):

$$zo_2c$$

wherein Z represents a halogen atom and R<sub>1</sub> has the same meaning as in claim 1.

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7. (Currently Amended) A method of producing the indole derivative of claim 1, the method comprising the steps of:

(a) reacting a compound of formula (2):

$$R_3O_2C$$

wherein  $R_3$  represents a lower-alkyl group, with haloid or (1) an aldehyde corresponding to  $R_1$  in the presence of silane, and aldehyde corresponding to ( $R_1$  has the same meaning as in claim 1) or (2) halide of  $R_1$ , wherein  $R_1$  has the same meaning as in claim 1;

(b) hydrolyzing a compound of formula (3) obtained in step (a):

$$R_3O_2C$$
 $R_1$ 
 $R_1$ 
 $R_3$ 

wherein  $R_1$  has the same meaning as in claim 1;

(g) reacting a halogenating agent with a compound of formula (4) obtained in step (b):

$$HO_2C$$
 $R_1$ 
 $R_1$ 

wherein  $R_1$  has the same meaning as in claim 1;

(i) reacting <u>an</u> ammonia?? or <u>an</u> aqueous ammonia with a compound of formula (8) obtained in step (g):

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wherein Z represents a halogen atom and  $R_1$  has the same meaning as in claim 1; and (j) reacting <u>a</u> sulfonylhalide to a compound of formula (9) obtained in step (i):

$$H_2N$$
 $H_2N$ 
 $H_3$ 
 $H_4$ 
 $H_5$ 
 $H_$ 

wherein  $R_1$  has the same meaning as in claim 1.

- 8. (New) A method for preventing or treating impaired glucose tolerance, diabetes, diabetic complications, syndrome of insulin resistance, polycystic ovary syndrome, hyperlipidemia, atherosclerosis, cardiovascular disorders, hyperglycemia, or hypertension, comprising administering to a patient in need thereof an effective amount of a compound of claim 1.
- 9. (New) A method for lowering blood sugar levels, which compromises administering an effective amount of a compound of claim 1.